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| NXP, B.V. NXP INTELLECTUAL PROPERTY & LICENSING M/S41-SJ 1109 MCKAY DRIVE SAN JOSE, CA 95131 | | | JIANG, YONG HANG | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

Office Action Summary

Application No.

10/525,810

Applicant(s)

AMTMANN, FRANZ

Examiner

YONG HANG JIANG

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-8,10,12-14 and 16-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-8,10,12-14 and 16-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB06)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ ~~Notes of Informal Patent Application~~
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

Applicant's amendment filed 8/24/2009 has been entered. Claims 1, 3, 7, 8, 10, 14, and 16 are currently amended. Claims 2, 4, 9, 11, and 15 are cancelled. Claims 1, 3, 5-8, 10, 12-14, and 16-25 are pending.

Response to Arguments

Applicant argues on the third paragraph of page 8 that because Vacherand teaches that the sequence number of each tag is assigned to the tag by the interrogator, Vacherand fails to teach each tag independently generating its own sequence number, and therefore does not teach the limitation of "the transponder on...independently generates a presence signaling signal". The examiner respectfully disagrees. Vacherand teaches using a sequence number whose binary size is significantly smaller than that of the ID code for quick detecting of the tags using the binary codes (Col. 3, lines 6-10). To one of ordinary skill in the art, the teachings of Vacherand may be applied to any RFID interrogator system for quick detecting of the tags by using a shorter code, and the shorter code may be assigned by the interrogator or pre-assigned in the tag of the interrogator system by one of ordinary skill in the art to achieve the desired results of quicker tag detection using shorter identification codes.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 3, 7-8, 10, 14, 16-17, and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer et al. (US 7,084,769), and in view of Cesar et al. (US 6,172,596) and Vacherand et al. (US 6,650,228).

Referring to claim 1, Bauer et al. disclose a method of inventory at least one transponder by means of a communication station, wherein the communication station emits an unmodulated carrier signal in a communication range and wherein the transponder on entering the communication range emits a response signal to the reader (col. 2 lines 50-60; col. 3 lines 10-20 and col. 5 lines 46-51; see Figure 1).

However, Bauer et al. did not explicitly disclose a communication method wherein the communication station emits a signal in a communications range, and wherein the transponder on entering the communications range emits a presence-signaling signal in the communications range, and wherein the communication station on receiving a presence-signaling signal emits a command signal in the communications range, and wherein the transponder on receiving the command signal emits a response signal in the communications range permitting the identifying of the transponder, and wherein the communication station, on correctly receiving a response signal undertakes identifying of the transponder.

In an analogous art, Cesar et al. disclose a method of identifying at least one transponder (131,141) (i.e. tags) by means of a communication station (100) (i.e. base station), wherein the communication station (100) (i.e. base station) (i.e. step 405) emits a command signal in a communications range, and wherein the transponder (131,141)

(i.e. tags) on entering the communications range emits a presence-signaling signal (i.e. step 415) in the communications range, and wherein the communication station (100) (i.e. base station) on receiving a presence-signaling signal emits a command signal (i.e. step 435) in the communications range, and wherein the transponder (131,141) (i.e. tags) on receiving the command signal emits a response signal (i.e. step 445) in the communications range permitting the identifying of the transponder(131,141) (i.e. tags), and wherein the communication station (100) (i.e. base station), on correctly receiving a response signal undertakes identifying of the transponder(131,141) (i.e. tags) (col. 5 line 53 to col. 6 line 10). Both Bauer et al. and Cesar et al. teach RFID tags system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the identifying steps of Cesar et al. into Bauer et al. system to facilitate identification of tags.

Bauer et al. in view of Cesar et al. did not explicitly disclose wherein the transponder emits a presence-signaling with a first signal duration and a response signal with a second signal duration, and wherein the first signal duration is shorter than the second signal duration.

In an analogous art, Vacherand et al. disclose sequence number assigned to each tag will have a bit length much shorter than the ID code length, E.g., with an 8 bit long sequence number it can be envisaged to manage simultaneously 255 tags, each having an ID code of 64 or 128 bits, for instance (col. 3 lines 11-18). Bauer-Cesar and Vacherand et al., all teach tag communication system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have different

duration signals of Vacherand et al. into Bauer-Cesar with the motivation for doing so would allow simultaneously managing a large number of tags.

The examiner explained in the Response to Arguments section above, to one of ordinary skill in the art, it would have been obvious to include the transponder on entering the communication range independently generates a presence signaling signal in order to achieve the desired results of faster tag detection.

Referring to claim 7, independent claim 7 is directed to a communication station drafted in analogy to method claim 1. Hence, the subject-matter of the claim is not novel in view of the above-mentioned documents.

Referring to claim 8, independent claim 8 is directed to a transponder drafted in analogy to method claim 1. Hence, the subject-matter of the claim is not novel in view of the above-mentioned documents.

Referring to claim 14, independent claim 14 is directed to an integrated circuit drafted in analogy to method claim 1. Hence, the subject-matter of the claim is not novel in view of the above-mentioned documents.

Referring to claims 3, 10, and 16-17, since Vacherand et al. disclose sequence number assigned to each tag will have a bit length much shorter than the ID code length, E.g., with an 8 bit long sequence number it can be envisaged to manage simultaneously 255 tags, each having an ID code of 64 or 128 bits, for instance (col. 3 lines 11-18). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the ratio of the signal durations as claimed is desired upon designer choice. The examiner explained in the Response to Arguments section

above, to one of ordinary skill in the art, it would have been obvious to include the presence signaling signal is not assigned to the transponder in order to achieve the desired results of faster tag detection.

Referring to claims 20-22, Vacherand et al. discloses the presence-signaling signal does not include an identification data ID of the transponder (via minimizing the time for checking the presence of the tags is achieved by assigning to each of the tags a sequence number **without** the use of the tag's ID code. Col. 3, lines 6-10) and Bauer et al in view of Cesar et al. disclose the response signal includes the identification data ID of the transponder (See rejection on claim 1 above).

2. Claims 5, 12-13, and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer et al., in view of Cesar et al. and Vacherand et al., further in view of Meier (US 6,323,566).

Referring to claim 5, Bauer et al. in view of Cesar et al. and Vacherand et al. disclose the method of claim 1. However, Bauer et al. in view of Cesar et al. and Vacherand et al. did not explicitly disclose wherein the transponder emits a presence-signaling signal with a first transmission parameter and a response signal with a second transmission parameter.

In an analogous art, Meier teaches the transponder emits a presence-signaling signal with a first transmission parameter and a response signal with a second transmission parameter (col. 11 lines 33-43). Bauer and Meier teach tag communication system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the first and second signals with different

parameter of Meier into the combination of Bauer-Cesar-Vacherand to use a known technique to allow easy transponder to interrogator communication.

Referring to claims 12 and 18, recite the limitations of claim 5 and therefore are rejected on the same basis.

Referring to claims 13 and 19, Meier discloses wherein one of two different subcarrier frequencies of each subcarrier signal is used, one as first transmission parameter and one as second transmission parameter. (col. 11 lines 33-43)

3. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer et al., in view of Cesar et al., Vacherand et al., and Meier, and further in view of Walker (GB 2 288 952A).

Referring to claim 6, Meier discloses wherein one of two different subcarrier frequencies of each subcarrier signal is used, one as first transmission parameter and one as second transmission parameter (col. 11 lines 33-43), but Meier did not specifically disclose the two different subcarrier frequencies are 283 kilohertz and 424 kilohertz.

Walker teaches that transponders using a lower carrier frequency for communication has a lower power dissipation and current draw. (See page 2, lines 21-26)

From the teachings of Walker, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the subcarrier frequency for the first transmission parameter to be 283 kilohertz and the subcarrier frequency for the

second transmission parameter to be to be 424 Kilohertz as taught by Walker to lessen the power dissipation and current draw of the transponders.

4. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer et al., in view of Cesar et al., and Vacherand et al, and further in view of Bowers et al. (US 5,883,582).

Regarding claim 25, the combination of Bauer, Cesar, and Vacherand did not specifically disclose the transponder on entering the communications range generates and emits a plurality of presence-signaling signals in the communications range repeatedly at recurrent intervals to ensure that the communication station reliably receives at least one of the plurality of presense-signaling signal generated and emitted by the transponder

Bowers teaches a transponder in response to being powered by an interrogator repeatedly transmits a response message stored in the transponder at a fixed interval. (See Col. 2, lines 40-47)

From the teachings of Bowers, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Bauer, Cesar, and Vacherand to include the transponder on entering the communications range generates and emits a plurality of presence-signaling signals in the communications range repeatedly at recurrent intervals as taught by Bowers to transmit at predetermined periodic intervals with a fixed length non-transmission interval between each transmission interval for successful signal transmission.

5. Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer et al., in view of Cesar et al., and Vacherand et al, and further in view of Bowers et al. (US 5,883,582) and Vercellotti et al. (US 5,266,925).

Regarding claim 23, the combination of Bauer, Cesar, Vacherand, and Bowers discloses the claimed invention (See rejection on claim 25) but did not specifically disclose the plurality of presence-signaling signals in the communications range emit at random intervals.

Vercellotti teaches when electronic identification tags respond at random intervals, collisions between the tags are minimized when the tags are responding to interrogators. (See Col. 1, lines 54-59)

From the teachings of Vercellotti, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Bauer, Cesar, Vacherand, and Bowers to include the transponder on entering the communications range generates and emits a plurality of presence-signaling signals in the communications range at random intervals as taught by Vercellotti to minimize collisions between the tags when the tags are transmitting.

Regarding claim 24, the combination of Bauer, Cesar, Vacherand, Bowers, and Vercellotti did not specifically disclose the transponder terminates generation and emission of the plurality of presence signaling signals on receiving the inventorying command signal. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Bauer, Cesar, Vacherand, Bowers, and Vercellotti to include the transponder terminates generation

and emission of the plurality of presence signaling signals on receiving the inventorying command signal in order to prevent the transponder from interfering with other transponders, and also reduce the power consumption of the transponders.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YONG HANG JIANG whose telephone number is (571)270-3024. The examiner can normally be reached on M-F 9:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian A. Zimmerman can be reached on 571-272-3059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Y. J./
Examiner, Art Unit 2612

/Brian A Zimmerman/
Supervisory Patent Examiner, Art Unit 2612